

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A fault correction method implemented by a computer system for [[of]] correcting a fault in a process tool for semiconductor manufacturing, the method comprising:

~~collecting~~ storing in a memory of the computer system, old service activity data for old faults in said process tool;

receiving new service activity data for a new fault in said process tool;

comparing said new service activity data to said old service activity data;

identifying matching service activity data from said comparison and displaying the matching service activity data to a service operator who performs at least one [[; and]]

~~performing a~~ corrective action on the process tool based on said matching service activity data;[[.]]

receiving additional new service activity data relating to the new fault based on a result of the corrective action; and

updating the matching service activity data based on the additional new service activity data such that the service operator performing the corrective action builds a database of cases as corrective actions are performed or completed to correct the new fault.

Claim 2 (Currently Amended): The method of claim 1, ~~further comprising: wherein~~ said corrective action comprises performing one or more tests on said process tool using said matching service activity data, and said updating comprises generating in order to generate new matching service activity data, wherein said new matching service activity data narrows said matching service activity data.

Claim 3 (Original): The method of claim 2, wherein said performing said one or more tests includes ranking each test in said one or more tests according to the number of old faults in said matching service activity data that are projected to remain if said ranked test results in a pass.

Claim 4 (Original): The method of claim 3, wherein the rank of said ranked test increases as the number of old faults in said matching service activity data that are projected to remain if said ranked test results in a pass decreases.

Claim 5 (Original): The method of claim 2, wherein said performing said one or more tests includes ranking each test in said one or more tests according to the number of old faults in said matching service activity that are projected to remain if said ranked test results in a fail.

Claim 6 (Original): The method of claim 5, wherein the rank of said ranked test increases as the number of old faults in said matching service activity data that are projected to remain if said ranked test results in a fail increases.

Claim 7 (Currently Amended): The method of claim 1, wherein said performing said corrective action includes replacing one or more manufacturing system (MS) ~~part~~ parts in said process tool.

Claim 8 (Original): The method of claim 7, wherein said replacing said one or more MS parts includes ranking each MS part replacement according to the number of old faults in said matching service activity data that are corrected upon replacement of said ranked MS part replacement.

Claim 9 (Original): The method of claim 8, wherein the rank of said ranked MS part replacement increases as the number of old faults in said matching service activity data that are corrected upon replacement of said ranked MS part replacement increases.

Claim 10 (Original): The method of claim 7, wherein said replacing said one or more MS parts includes ranking each MS part replacement according to the number of old faults in said matching service activity data that are not corrected upon replacement of said ranked MS part replacement.

Claim 11 (Original): The method of claim 10, wherein the rank of said ranked MS part replacement increases as the number of old faults in said matching service activity data that are not corrected upon replacement of said ranked MS part replacement decreases.

Claim 12 (Original): The method of claim 1, wherein said collecting said old service activity data for said process tool includes collecting old service activity data for at least one of an etch system, a deposition system, a track system, a thermal system, an ion implant system, a lithography system, a planarization system, a metrology system, and a test system.

Claim 13 (Original): The method of Claim 1, wherein said performing a corrective action comprises automatically controlling said process tool to correct said fault therein.

Claim 14 (Original): The method of Claim 1, wherein said performing a corrective action comprises providing service action data to a service operator to assist the service operator in correcting said fault in said process tool.

Claim 15 (Original): The method of Claim 1, wherein said performing a corrective action comprises isolating said fault in said process tool.

Claim 16 (Original): A computer readable medium containing program instructions for execution on a processor, which when executed by the processor, cause a computer system to perform the steps in the method recited in claim 1.

Claim 17 (Currently Amended): A system for using a computer system to correct a fault in a process tool for semiconductor manufacturing comprising:

means for ~~collecting~~ storing old service activity data for old faults in said process tool;
means for receiving new service activity data for a new fault in said process tool;
means for comparing said new service activity data to said old service activity data;
means for identifying matching service activity data from said comparison and
displaying the matching service activity data on a display to assist a service operator in; ~~and~~
~~means for performing a~~ at least one corrective action based on said matching service activity data[.];

means for receiving additional new service activity data relating to the new fault
based on a result of the corrective action; and

means for updating the matching service activity data based on the additional new
service activity data such that the service operator performing the corrective action builds a
database of cases as corrective actions are performed or completed to correct the new fault.

Claim 18 (Currently Amended): A system for correcting a fault in a process tool for semiconductor manufacturing comprising:

a memory configured to store data necessary for correcting said fault; and
a control system configured to:

collect and store old service activity data for old faults in said process tool,
receive new service activity data for a new fault in said process tool,
compare said new service activity data to said old service activity data,
identify matching service activity data from said comparison, and displaying the
matching service activity data on a display to assist a user in ~~and perform~~ performing a at
least one corrective action based on said matching service activity data in order to correct
said new fault in said process tool;
receive additional new service activity data relating to the new fault based on a result
of the corrective action; and
update the matching service activity data based on the additional new service activity
data such that the service operator performing the corrective action builds a database of cases
as corrective actions are performed or completed to correct the new fault.

Claim 19 (Currently Amended): The system of claim 18, wherein said control system
is configured to update ~~perform one or more tests on said process tool using~~ said matching
service activity data ~~in order to generate~~ by generating new matching service activity data,
wherein said new matching service activity data narrows said matching service activity data.

Claim 20 (Original): The system of claim 18, wherein said process tool includes at
least one of an etch system, a deposition system, a track system, a thermal system, an ion
implant system, a lithography system, a planarization system, a metrology system, and a test
system.